

# Polyoxometalate and Zirconium-Phosphate Conversion Coating for Steel Piping, Phase II

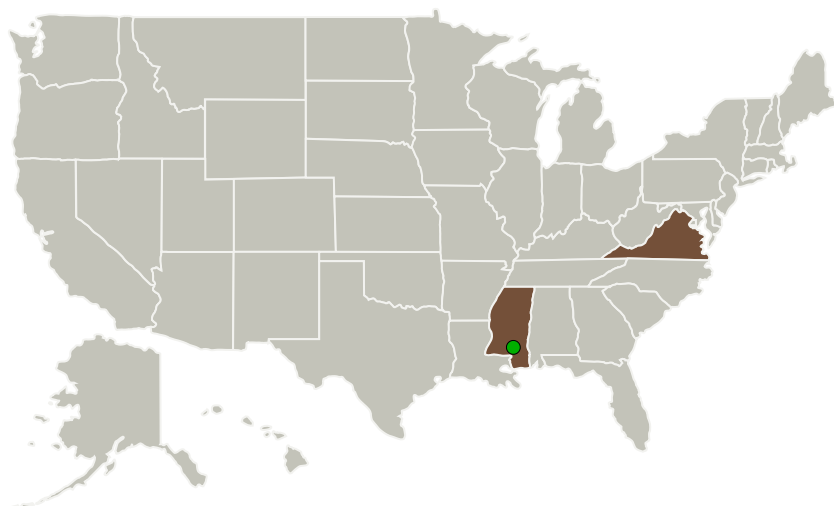
Completed Technology Project (2013 - 2015)



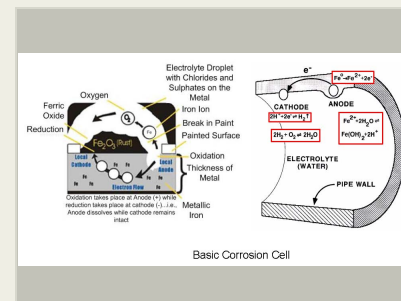
## Project Introduction

In Sub-topic O3.04, NASA has identified a need for control of material degradation to extend the life and reduce the life-cycle costs of piping systems subject to microbial influenced corrosion in the presence of untreated or brackish water. The corrosion mechanisms of greatest interest are salt and acid attack due to exposure to brackish and untreated waters. International Scientific Technologies, Inc., in conjunction with Ferrum College, proposes the development of a protective barrier conversion coating to prevent corrosion cell formation in steel substrates.

## Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
International Scientific Technologies, Inc.	Lead Organization	Industry	Dublin, Virginia
● Stennis Space Center(SSC)	Supporting Organization	NASA Center	Stennis Space Center, Mississippi



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## Primary U.S. Work Locations

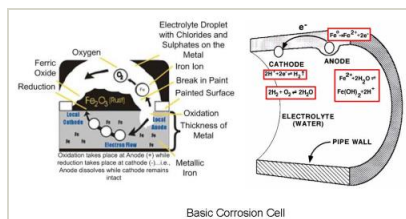
Mississippi

Virginia

## Project Transitions

**July 2013:** Project Start**July 2015:** Closed out

## Images



## Project Image

Polyoxometalate and Zirconium-Phosphate Conversion Coating for Steel Piping

(<https://techport.nasa.gov/image/133208>)

## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Organization:

International Scientific Technologies, Inc.

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

### Program Director:

Jason L Kessler

### Program Manager:

Carlos Torrez

### Principal Investigator:

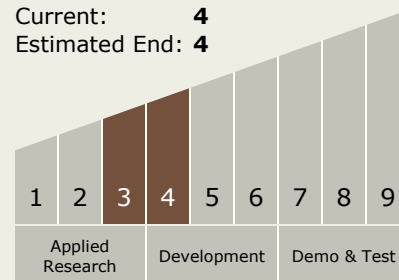
Michael Harig

## Technology Maturity (TRL)

Start: **3**

Current: **4**

Estimated End: **4**



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## Technology Areas

### Primary:

- TX13 Ground, Test, and Surface Systems
  - └ TX13.1 Infrastructure Optimization
    - └ TX13.1.1 Natural and Induced Environment Characterization and Mitigation

## Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System